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Opportunities and Constraints for Black Farming in a Former South African Homeland: A Case Study of the Mooi River Irrigation Scheme, Msinga, KwaZulu-Natal, South Africa

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## OPPORTUNITIES AND CONSTRAINTS FOR BLACK FARMING IN A FORMER SOUTH AFRICAN HOMELAND: A CASE STUDY OF THE MOOI RIVER IRRIGATION SCHEME, MSINGA, KWAZULU-NATAL, SOUTH AFRICA

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**ABSTRACT** The creation of a viable black farming sector has been one of the greatest challenges facing post-apartheid South Africa. While land reform was expected to become a cornerstone in achieving this, there is a growing consensus that it has not yet contributed to the emergence of viable black farmers. In this context, this study proposes the necessity of looking elsewhere and re-examining the current state and performance of black farmers in former homelands. Drawing on interviews with farmers who engage in crop farming at the Mooi River Irrigation Scheme in the Msinga district of KwaZulu-Natal, this study explores the opportunities and constraints for small-scale black farming. Irrigation schemes could stand out as exceptions to the general picture of former homelands which were largely equated with labour reserves for white business interests and consequent de-agrarianisation. This study has identified the availability of water and various informal markets as opportunities for small-scale black farmers to pursue agricultural livelihoods. However, there is differentiation among smallholders, not only in terms of the size of land and production, but also with regard to gender and generation. A number of constraints have also been recognized including shortage of labour, high production costs (especially hiring tractor services for land preparation), lack of or unreliable state support, and the increasing shortage of water.

**Key Words:** Black farming; Irrigation scheme; Homeland; Farmer diversity; KwaZulu-Natal.

### INTRODUCTION

The creation of a viable black farming sector has been one of the greatest challenges facing post-apartheid South Africa. The introduction of a programme with a three-pronged approach consisting of land redistribution, land restitution, and tenure reform was expected to become the cornerstone of land reform policy. The policy originally aimed to transfer 30% of white-owned farms to blacks within five years of the first democratic elections. The deadline for reaching this goal was deferred several times and, eventually, the government stopped mentioning it altogether.<sup>(1)</sup> Moreover, the dismal performance of many land reform farms has become apparent, as illustrated by the Minister of Rural Development and Land Reform, who stated in 2010 that “more than 90% of land reform projects are dysfunctional” (quoted in Aliber et al., 2013: 92). While his statement is disputed by some academics, who believe that the failure rate for land reform farms is much lower (Aliber et al., 2013: 287), there is a growing consensus that land reform has not yet contributed to the emergence of viable black

farmers.

Given that land reform policy is not producing the desired results, this paper proposes that other perspectives should be explored to identify opportunities for small-scale black farmers in South Africa. In particular, I would argue that there is a pressing need to re-examine the current state and performance of black farmers in former homelands, which house approximately one-third of the population on only 13% of the country's land. Throughout most of the twentieth century, homelands were largely characterised by widespread poverty. These homelands were used as labour reserves for white business interests, such as mining and commercial farming. It has been argued that black farmers living in homelands worked on such small pieces of land that their yields were insufficient to meet even the lowest household subsistence requirements. The majority of residents were elderly, women, or children, who were widely considered unproductive farmers. Their dominant sources of income have long been remittances from migrant workers and social pensions (Wolpe, 1972; Platzky & Walker, 1985; Bundy, 1988; Beinart, 1994). While these characteristics may still be prevalent and even dominant across former homelands, real diversity among the homelands has not yet been examined extensively in the literature (Beinart, 2012).

One of the key elements influencing agricultural production in South Africa is the availability of water. During the twentieth century, a number of irrigation projects were created not only for white farmers but also for small-scale black farmers. By the early 2000s, the total amount of irrigated land used by smallholders had increased to 100,000 hectares, although this still represented less than one-twelfth of the total amount of irrigated land in South Africa (Van Averbeké & Mohamed, n.d.: 1–3). Despite the advantages that irrigation presents for farming, it was only since the beginning of the twenty-first century when a growing number of studies began discussing its use by black farmers in detail (Tapela, 2008; Cousins, 2012; Van Averbeké, 2012; Buthelezi, 2013; Van Averbeké & Denison, 2013; Van Averbeké & Mohamed, n.d.). This study aims to contribute to this emerging literature by looking at the characteristics of land tenure, agricultural production, and market interactions by black farmers in the Mooi River Irrigation Scheme in KwaZulu-Natal Province. This study specifically seeks to address the following two questions: What types of agricultural production do these farmers engage in; are they mainly subsistence farmers or market-oriented farmers? And, to what extent do they have the potential to become emerging farmers, and what are their primary constraints to doing so?

## CONSTRAINTS OF BLACK FARMING, THE “ACCUMULATION FROM BELOW” AND RURAL DIFFERENTIATION IN THE SOUTHERN AFRICAN CONTEXT

In spite of a highly commercialised agricultural sector owned and managed mainly by white farmers, South Africa is not necessarily blessed in terms of

natural resources and climatic conditions. Lipton (1993: 362) states that less than 20% of South Africa's approximately 100 million ha of farmland are arable and only four million of these are high potential arable. Apart from poor soil in much of the remaining areas, low and erratic rainfall makes agriculture an unreliable and highly risky enterprise. While the history of the South African commercial farming sector essentially shows how white settler farmers have overcome these obstacles by organising themselves into politically-influential agricultural unions and by obtaining state support in various regards (Lipton, 1989), it also illuminates how black commodity producers who were once chief providers of staple foods in the country in the mid to late nineteenth century (Bundy, 1988) fell from that position and became labourers in mines and white-owned farms in the twentieth century. Consequently the South African agricultural sector has been characterised as consisting of two agricultures, one highly commercialised and capital intensive and the other subsistence-oriented and without access to finance and meaningful markets. The dualism in the agricultural sector is in fact common to African settler colonies like Zimbabwe and Namibia and dismantling it became one of the major political challenges after independence (Moyo & Yeros, 2005; Moyo, 2007). However, due to the length of colonisation and the extensiveness of land dispossession of African people, together with high degrees of capitalist developments in agricultural and industrial sectors, South Africa has been considered to be an "extreme and exceptional" case (Bernstein, 1996; 2005).

Indeed radical historians have argued that native reserves were essentially labour reserves where agrarian economies were only able to partially contribute to social reproduction of labour. The extreme processes of land alienation and oppression since the colonial period systematically undermined the conditions of peasant production. Since land was too small to maintain peasant production in native reserves, its residents were sooner or later destined to become labourers in the growing capitalist sector (Wolpe, 1972; Morris, 1976). While radical historians highlighted the oppressive nature of the South African states, their assumption that peasants had completely abandoned commodity production and are therefore destined to become a semi-proletariat or full-time proletariat is highly problematic. Because, as Neocosmos (1993: 6) argued, "[d]espite intense political oppression, extra-economic coercion and unequal exchange, capitalist relations have produced, however meekly, however mildly, however partially, class differences among the oppressed." Due to radical historians' tendency to view residents in native reserves as "overwhelmingly proletarianised" and to ignore "political economy of rural petty-commodity production," they failed to explain the origins of rising peasant production in post-independence Zimbabwe when it occurred (Neocosmos, 1993: 25–29). Drawing on Lenin's distinction of two types of agrarian accumulation that took place in history, namely accumulation "from above" in Prussia and accumulation "from below" in America, Neocosmos (1993: 50–52) argued that "a certain amount of 'accumulation from below' must have" occurred in the South African countryside. We should not be blind to the existence of "petty commodity producers" and rural differentiation that have been "caused by a shortage of means of production."

The problem of characterising native reserves as an overwhelmingly proletarianised population is not just theoretical or academic. This is a highly policy-related issue as well, because, come the end of apartheid, we need to explore where and how we could find black agricultural commodity producers in order to dismantle the dualism in the agricultural sector. This was one of the major policy questions in the early 1990s and at that time expectant eyes were cast on sugar-cane cultivation by small growers in KwaZulu and KaNgwane. In these homelands, sugar-cane cultivation has been introduced to small growers through contract farming with sugar mills since the mid-1970s. Secure access to market and the provision of inputs, financial loan and agricultural extension services to small growers on contract made it easier for resource-poor small growers to enter this sector and contributed to its growth (Bromberger & Antonie, 1993: 431–434). By 1992, small growers in KwaZulu produced about 8% of the industry's total sugar-cane production (Bates, 1996: 59). A similar contract farming of timber production was introduced to small growers in northern KwaZulu in the mid-1980s (Cairns, 1995). Although Bromberger & Antonie (1993: 434) expectantly stated that contract farming “is the only real option” for black farmers in former homelands, others are less optimistic cautioning that it is not a panacea (McIntosh & Vaughan, 1996).

Other potential origins of black commodity producers in post-apartheid South Africa could have been found in irrigation schemes in former homelands. However, in contrast to the importance of contract farming that was pointed out from the beginning of the transition to post-apartheid, it was only at the beginning of the twenty-first century when researchers began analysing small farmers in irrigation schemes in order to identify development possibilities (Tapela, 2008; Cousins, 2012; Van Averbeke, 2012; Buthelezi, 2013; Van Averbeke & Denison, 2013; Van Averbeke & Mohamed, n.d.). By then the connection between agricultural and non-agricultural incomes was recognised and the diversification of livelihoods or the multiple livelihoods came to be seen as a common survival/livelihood strategy for rural households in South Africa. This meant that rural households obtained income from various sources including agricultural production, informal sector employment, remittances and social security transfers (May, 1996). Thus, Van Averbeke & Mohamed (n.d.: 8), drawing on a case study of a smallholder irrigation scheme in Limpopo province, reported highly diverse livelihoods and farming of plot holders in the scheme. According to them, only 20% of the households “derived at least half of their income from agriculture. The others also farm, but they derived most of their income from sources other than farming.”

If the rural population is no longer considered to be a homogenous entity, but has diverse households who may or may not derive considerable income from agriculture, the next question we need to ask is how we can break them down into different categories and to find out on what basis they are differentiated. Van Averbeke & Mohamed (n.d.: 8–11) classified plot holders at an irrigation scheme in Limpopo into four “farming styles”—“food farmers” who produce mainly for own consumption, “employers” who hire workers to grow crops because

they are too old to farm or they engage in other livelihood activities, “profit makers” who farm to earn cash income and “others” who have a combined characteristic of food farmers and profit makers. According to them, these four types of farmers differed “in terms of choice of crop, crop husbandry, attitude towards risk, allocation of produce and marketing practices.” Their choice of “farming styles” in describing rural differentiation is interesting, as it captures not only the distinction between those who grow crops for subsistence (“food farmers”) and those who sell their agricultural produce (“profit makers”), but also it introduces two mixed or transitional categories. In fact they state that livelihood type and farming style were not only diverse, but very dynamic and could change rapidly “in a matter of one or two seasons.”

Knowing the amount of income and income sources of rural households is not always easy, partly because they might be unwilling to disclose such information to researchers. Faced with this problem, Tapela (2008: 189–190) used assets (especially vehicle and tractor) ownership in order to measure socio-economic differentiation between and among plot holders and non-plot holders in three irrigation schemes in Limpopo. However, she states that “a number of householders among the subsistence food producers were found to own more of the expensive material assets, such as cars and electrical appliances than petty-commodity producer households.” Thus she implies that income from agriculture may not be a determining factor in rural differentiation. On this issue of the sources of differentiation among rural households with irrigated plots in KwaZulu-Natal, Cousins (2012: 24) emphasises the importance of off-farm income “for successful accumulation in agriculture.” In a later article, Cousins (2015: 258) differentiates “market-oriented black smallholders” who have plots in irrigation schemes based on whether they supply their fresh produce to “tight” supply chains such as supermarkets or “loose” supply chains such as informal and pension day markets. He estimates each number as 5,000–10,000 (the former) and 200,000–250,000 (the latter) in South Africa. Thus rural differentiation can be analysed in different ways based on farming style (Van Averbeké & Mohamed, n.d.), assets ownership (Tapela, 2008) or access to different markets (Cousins, 2015).

My own case study of black farmers in the Mooi River Irrigation Scheme in KwaZulu-Natal below also looks at diversity and differentiation among these farmers. However, instead of focusing on different farming methods or production size, this study will bring in a sociological perspective by introducing four categories of farmers based on gender and generation and describe concrete examples of each category of farmers. This was done partly because this study also encountered the same problem as Tapela (2008) and found it difficult to compute their income from agriculture when respondents used various parameters in their answers (see discussion below). But there is also a positive reason. The purpose of bringing in sociological categorisation is to give a better understanding of not only plot holders in the concerned irrigation scheme in particular, but also black small farmers in former homelands in general, by describing them not just as farmers, but also in familiar terms as grandfather, grandmother,

migrant worker, and youth. If Cousins' (2012: 1) claim that "the paucity of reliable data on small-scale agriculture, and lack of clarity on the meaning of terms such as 'smallholder' and 'small-scale agriculture'" hinder the meaningful "debates on agrarian reform in South Africa" still holds water, it is my wish to contribute to deepening the understanding of black smallholders by bringing in a new perspective in describing black farmers.

## MOOI RIVER IRRIGATION SCHEME AND RESEARCH METHODOLOGY

The Mooi River Irrigation Scheme is situated in the southern part of the former KwaZulu district of Msinga in mid-western KwaZulu-Natal, South Africa. It currently lies in the local Msinga municipality and falls under *inkosi* (chief) Mchunu and the Mchunu traditional authority. The total area under irrigation is 601 hectares divided into 15 blocks and each block is demarcated by fences.<sup>(2)</sup> Most blocks lie along the Mooi River, which has historically served as a natural boundary between the white farming district of Muden/Umvoti and the black district of Msinga. This study was conducted with black farmers who used plots on Blocks 1–9, which fall under the authority of one *isigodi* (tribal ward) known as *Ekuvukeni*. *Isigodi* (pl. *izigodi*) is a territorial unit of traditional authority among the Zulu people. It usually refers to an area with boundaries that are physically defined by natural objects such as hills or rivers. An *induna* (pl. *izinduna*) is appointed by a chief (*inkosi*, pl. *amakhosi*) for each *isigodi*; however, an *isigodi* is not recognised as an administrative unit by any government entity in South Africa. *Ekuvukeni isigodi* is situated along a stretch of land about 10–19 km down a gravel road from the nearest village of Muden, and about 38–47 km from the nearby town of Greytown, where one can find modern supermarkets and banks.

The construction of irrigation furrows used to draw water from the Mooi River dates back to the end of the nineteenth century during the Natal colonial period. While archival research indicates that white engineers contracted by the Natal colonial government led its construction,<sup>(3)</sup> local oral tradition maintains that local men dug the furrows downriver to the flatland under the instruction of *inkosi* Mchunu. *Inkosi* Mchunu is also credited with securing assistance from the colonial government by obtaining implements and dynamite to remove large boulders during the excavation process.<sup>(4)</sup> The Mooi River Irrigation Scheme was part of a twin irrigation project in Natal at that time along with the Tugela River Irrigation Scheme, which is located along the nearby Tugela River in the same district (Cousins, 2012; Buthelezi, 2013). Once the canal was built, local black farmers cultivated plots on the irrigated fields. In the early twentieth century, farmers were required to pay rents to the authority, but they were frequently unable to do so and stopped paying at some point.<sup>(5)</sup> When the Tomlinson Commission conducted a research programme in 1952 on socio-economic development on native reserves, the Mooi River scheme was counted among 122 irrigation projects in place for small farmers at that time, including some that were



still under construction (The Commission for the Socio-economic Development of the Bantu Areas within the Union of South Africa, 1955). In the late twentieth century, management of the irrigation scheme was transferred to the KwaZulu Department of Agriculture, which improved the construction by fortifying the canal with concrete supports and placing fences in the fields to protect crops from livestock.<sup>(6)</sup>

The data for this study were collected using semi-structured interviews with 94 black farmers who were using plots on Blocks 1–9 in the Mooi River Irrigation Scheme in June 2014.<sup>(7)</sup> In addition, follow-up interviews with 21 black farmers in Block 2 were conducted in August 2016 to get additional historical context and clarify some information that had emerged from the 2014 interviews. Aside from black farmers, the research also included information from interviews with a local *induna* and village elders, an extension officer in charge of the scheme based in Tugela Ferry, traders working at monthly pension day markets in Mudén, and street traders selling vegetables in Greytown. Archival research on the scheme was also conducted from 2014 to 2016 in Pietermaritzburg, Ulundi, and Pretoria, South Africa.

In 2014 and 2016, the author together with local research assistants visited fields in the scheme and interviewed people who were working there. Therefore, the sample is not representative of all plot-holders or villagers in Ekuvukeni, Msinga. However, from a practical perspective it was necessary to approach the data collection this way, as the number of households in Ekuvukeni is far larger than the number of plot-holders and, at the time of the research, there was no central list available of farmers who owned or used plots on the scheme.<sup>(8)</sup> Furthermore, to collect the most useful data for the analysis, we decided to concentrate on people who cultivated land. Respondents were approached in the field and asked if they would be willing to participate in the study after a short introduction of the researcher and the project. The farmers often agreed to participate, but the interviews were sometimes conducted while the farmers were working on harvesting crops or weeding and not in a controlled environment. We interviewed all farmers who were actually working in their fields on the days when we visited as long as they agreed to be interviewed. Thus, our sample excluded those farmers who owned plots, but no longer came to work on the plots for whatever reasons. In this sense this study illustrates only the farming activities observed in the irrigation scheme on the days we visited rather than how plot-holders in general used their plots. We visited each block for a few days. The goal of this study was to find out how the farmers accessed land and other resources, what they produced, and where they sold their goods. In other words, this study investigated their land tenure arrangements and agricultural activities.



## CHARACTERISTICS OF BLACK FARMERS IN THE MOOI RIVER IRRIGATION SCHEME

Of the 94 black farmers interviewed on the Mooi River Irrigation Scheme in 2014, 74 were female and 20 were male. A majority of them (72%) were 50 years old or older, and 40% of them were pensioners who were living with their grandchildren and/or children. A majority of them were married/cohabitating<sup>(9)</sup> (54%) or widowed (35%). Most of them were born locally or married locally. Those respondents who were not local had moved to the area through marriage. Almost all the respondents lived in one of the villages (*imihlati*, sing. *umhlati*) close to the irrigation plots at Ekuvukeni *isigodi*. Nearly 60% of them had no formal education and could speak only isi Zulu. While 39% of respondents could speak, write, and read in isi Zulu, only 13% of them could do so in English.

In this part of Msinga, the population's basic rural livelihood comes from mixed farming. They grow vegetables on plots in the Mooi River Irrigation Scheme or in tiny gardens within their households' residential lands. The average plot size in the irrigation scheme is very small, usually 0.1 hectares or less.<sup>(10)</sup> As shown in Table 1, some farmers cultivate more than 10 plots, while most cultivate less than four plots.

Villagers also keep livestock, although ownership is unevenly distributed. At the time of the study, only one-third of the respondents owned cattle and about 60% owned goats; one-third owned neither cattle nor goats. Livestock farming in Msinga can be categorised as extensive. Cattle and goats graze around the mountainous areas and riverbanks and are not herded. Goats are either collected by the farmer or they come home on their own in the evening, where they are kept in the kraal overnight. Cattle are usually collected once per week or once every two weeks when their owners take them to a communal dipping facility. This kind of livestock practice clashes with crop farming unless the crops are protected by fences, as cattle and goats enter the fields and the gardens searching for food and eat all the crops, especially during the winter months when grass is scarce.

A large majority of respondents (82%) told us that they received some income

**Table 1.** Number of plots cultivated by farmers in the irrigation scheme (N = 65)

Number of plots	Farmers
One	10
Two	17
Three	12
Four	9
Five to Nine	13
Ten and above	4

Source: Author's interviews in 2014 and 2016.

from selling the crops they grew on their irrigated plots; however, it was difficult for us to compute their income from agriculture because they used various parameters to describe how much they earned. For instance, one respondent said, “R500 after three months,” another said, “R1,000 after the harvest,” and yet another answered, “R5,000 for cabbage in 2013.” Many of them also stressed that their income from selling crops differed depending on the harvest that year. Therefore, instead of estimating how much income the farmers made from agriculture, it is important to stress here that the majority of them received at least some income from agriculture, but the amount may be highly variable.

While income from agriculture is unique to people in this area because of their access to irrigated plots, their other income sources were comparable to their counterparts in other former homelands in South Africa. Like many black people on former homelands, social grants were important income sources—nearly 40% received pensions, 46% received child support grants, and 7% received disability grants. On the other hand, only a limited number of respondents had other forms of income including salaries (6%), remittances from family members (6%), and proceeds from irregular work on white farms or smallholder plots (4%).

Nonetheless, it is worth noting that most respondents (82%) had worked elsewhere in the past. The most common job (39%) was casual farm work on white farms in Muden. All the respondents who had done this type of farm work were women, most of whom reported that they accepted these assignments only when they were young. The second occupational category was government work (15%), which usually included men who had worked for the Department of Agriculture for the KwaZulu government. A similar number of men (14%) said that they had worked as migrant workers in the past, and had travelled to work in mines in Gauteng Province and factories in Durban. Most of them returned to Msinga as a result of retrenchment. Other respondents mentioned various jobs in Muden and Greytown including domestic work. To sum up, this study found that women typically worked on white farms in the neighbouring farming districts as casual workers, while men typically worked for the KwaZulu government or became migrant workers, returning to Msinga only once or twice a year until they were retrenched and came back permanently. Upon their return home, some men in Ekuvukeni decided to work on their plots in the irrigation scheme.

## LAND ACCESS AND RENTAL IN THE IRRIGATION SCHEME

The land of former KwaZulu is officially known as “Ingonyama land” and is now legally owned by the KwaZulu-Natal Ingonyama Trust, a statutory institution set up by the KwaZulu-Natal Ingonyama Trust Act (1994) and its Amendment Act (1997).<sup>(11)</sup> The land tenure system on Ingonyama land is referred to as a customary land tenure, through which individuals and/or households obtain access to residential and arable lands and communal grazing land through their

membership in a particular group. In former KwaZulu, this group was usually chieftaincy groups or “tribes” led by chiefs (*amakhosi*). Land rights under a customary land tenure system differ from those of legal ownership or possession under a freehold system. For instance, residential and/or arable land cannot be used as collateral for credit from financial institutions. However, once residential and/or arable land is allocated to an individual and/or a household, the land rights stay with them as long as the land is being used. They can also pass the land on to other family members through inheritance.

People in Ekuvukeni *isigodi* belong to the Mchunu traditional authority. *Inkosi* Mchunu was in his 90s and the oldest chief in South Africa at the time of interview in 2014.<sup>(12)</sup> Given the exceptionally long period of his reign in the chieftdom, he was well-known in the area and seemed to be highly respected among the local people. In theory, one needs permission from a traditional leader (*inkosi* or *induna*) to build a house or cultivate a plot under customary land tenure. However, our research indicated that traditional authority figures do not necessarily have exclusive rights to allocate residential land to build homestead in Ekuvukeni. When we asked 94 black farmers how they obtained their residential lands in Ekuvukeni in 2014, 51 of them answered that they were household plots. Sixteen of those respondents inherited their plots and 35 received land rights through marriage. Alternatively, 33 people said that they obtained their residential lands through a traditional authority, either *induna* or *inkosi*. In addition, five people said that they first asked their neighbours for permission to build a house, and were sent to *inkosi* or *induna* after the neighbours had accepted them into the community. Another three respondents said that they asked their neighbours if they could build a house, and the neighbours allowed them to do so without the involvement of any authorities whatsoever.<sup>(13)</sup>

Eight out of 43 respondents, excluding those who answered that they had household plots, said that they had obtained permission from neighbours to obtain residential land rights.<sup>(14)</sup> Proportionally, this may not seem substantial; however, an *induna* from Ekuvukeni *isigodi* further explained the procedure one had to follow to obtain residential land in his area in 2016. Someone who wanted to obtain residential land rights must first visit their potential new neighbours and introduce themselves. Then, the neighbours would direct him or her to an *induna*. After the *induna* had met the prospective owner(s), he would go to see an *inkosi* to report it and ask for permission to allocate the land. According to the *induna*, the *inkosi* had a list of the names of households in each village (*umhlati*). The *induna* also emphasised that anyone, regardless of gender, could ask for land in his area.<sup>(15)</sup> He also noted that in recent years there were hardly any outsiders moving to the area and demand for new residential land usually came from the sons of local families who wanted to establish independent households.<sup>(16)</sup>

As for the agricultural land in the irrigation scheme, Table 2 shows that 56 out of 82 respondents who owned plots answered that they held household plots that they inherited from their parents or other family members. Twelve people rented plots and thus didn't own their plots. Another 12 people received land

**Table 2.** How did you obtain your plots in the irrigation scheme? (N = 94)

Answer	Respondents
Household plot (inheritance)	56
From traditional authority	12
Renting	12
From previous owner	7
From government	5
Other	1
Unknown	1
Total	94

Source: Author's interviews in 2014.

rights to their plots from a traditional authority. Somewhat unexpectedly, 7 people answered that they obtained their plots from the previous owners. This demonstrates the existence of private transactions for plots in the irrigation scheme, albeit to a limited degree. However, the nature of these transactions differs from that of land purchases in the usual sense. In most of these cases, lease agreements preceded the transfer of ownership. When the previous owner became too old to continue farming, or when none of the previous owner's family members were interested in farming, the borrower was eventually able to take over the plot. As mentioned earlier, that Van Averveke & Mohamed (n.d.) introduced an "employers" category to describe those who are too old to farm or who engage in livelihood activities other than farming and therefore employ someone to use their plots in the irrigation scheme in Limpopo. The result from this study implies the possibility that those "employers" could eventually lose or give their plots to "employees."

In addition to 12 people who didn't own plots and cultivated only the rented plots as captured in Table 2, 11 more people borrowed plots. Thus, the total number of respondents who borrowed plots amounted to 23 (out of 94). This means that the land rental market in the Mooi River Irrigation Scheme was active to some extent. In almost all cases, the borrowing arrangements were quite informal and did not include any written agreement or specified duration. However, in many cases, tenants provided the owner with some of their crops. In some cases, they provided harvesting and weeding labour to the owner in lieu of rental payments. The existence of de facto private transactions and informal land rental practices means that the tenure system in the irrigation scheme has not so far been an obstacle for people who wanted to farm. The number of plots each respondent used differed significantly, from one to over ten plots, and the constraints on production seemed to be a result of a lack of manpower and cost of production (as discussed later) rather than a lack of land. This was also illustrated by the existence of numerous uncultivated plots in the irrigation scheme. Many studies raised the issue of non-cultivation or under-cultivation of arable lands in the homelands without explaining the reasons behind it (Bromberger & Antonie, 1993: 420; Lipton, 1993: 376). This has a huge implication on the necessity and justification of land reform, as one

could then argue that black people in the homelands are not in short supply of arable lands. However, this study argues that this is jumping to a wrong conclusion. What the existence of numerous uncultivated lands means instead is that land is essential but just one element in carrying out agricultural production. Other elements such as manpower, means of production and access to market are equally important as discussed in the following sections.

While the land rental market in the Mooi River Irrigation Scheme was active to some extent, it was also observed that customary influence over land tenure prevented the practice from expanding further. The KZN Department of Agriculture in Tugela Ferry has been keen to encourage farmers to expand their production, to use uncultivated plots. However, the Department of Agriculture stated that it did not have the authority to re-allocate unused plots to others because that responsibility fell to the chief.<sup>(17)</sup> However, the *induna* of the Ekuvukeni *isigodi* contradicted that statement, stating that it was the government that had the authority to allocate land in the irrigation scheme. It was, therefore, unclear who (or which institution) had the authority to allocate land in the irrigation scheme at the time of this study. However, the *induna* also said that they were in the process of transferring administration of the irrigated plots to the *inkosi*.<sup>(18)</sup> Even though South Africa's new land-tenure legislation, the Communal Land Rights Act (2004, CLaRA), has not been implemented because it was found to be unconstitutional, it seems that *inkosi*'s power over land allocation is increasing at the local level. This is also illustrated by the following comment from a respondent:

I used to pay R300 per plot every three months, but I no longer pay. *Inkosi* says that people must not pay because people live together on *inkosi*'s land. I have been borrowing plots for five years. Mr S [owner of the plot] thinks that it is a problem that he does not receive payment, but he is waiting because negotiations are ongoing. [Negotiation with whom?] Between Mr S, the people renting land from him, and the *inkosi*. He [Mr S] also needs money.<sup>(19)</sup>

It seems that the strong social norm in the customary land tenure system, which has a tendency to emphasize equality among members of a group, doesn't like particular persons or families to overwhelmingly benefit from land. In a similar vein Cousins (2012: 22) argues that in spite of an informal land rental market he also observed in the Tugela Ferry Irrigation Scheme, "the nature of the property regime" is one of the "two key constraints on accumulation" by those who want to expand their production.

## PRODUCTION PROCESSES AND MARKET FORCES

Next, let me turn to the production processes of black farmers in the irrigation scheme. What was clear from the interviews was that they relied on modern

farming methods and technology. They used tractors for ploughing rather than oxen and bought seeds and fertilisers in town (usually in Greytown) rather than keep their own seeds from the previous season. However, very few farmers owned a tractor themselves. It was only four respondents who had previously worked for the KwaZulu Department of Agriculture that owned tractors. Those farmers who did not own tractors had to rely on tractor services by the government or by tractor owners. There were two types of governmental tractor services available for black farmers in the irrigation scheme. First, the KZN Department of Agriculture in Tugela Ferry, which manages the scheme, sometimes provided free or reduced-cost tractor services.<sup>(20)</sup> Second, depending on the *imihlati*, farmers could rely on the Msinga local municipality to provide, at times, cheaper tractor services in certain blocks. However, these governmental tractor services were highly unreliable and infrequent. Thus, many farmers hired tractor services from owners in the scheme. Respondents reported that private tractor owners provided better ploughing services than government tractors, but the cost of hiring them could be quite high.<sup>(21)</sup>

In terms of labour supply, as most farmers cultivated just a few plots, they relied on themselves, their families, and occasionally neighbours for various farming tasks like planting and watering. Nevertheless nearly one-third of the farmers employed additional workers on a part-time basis or during peak periods, especially for weeding and harvesting. Workers were often paid in kind, but cash payments also took place. The amount paid varied depending on the task, the relationship between the plot owner and the worker, and whether the workers were paid monthly or daily. For example, workers received between R150 and R250 per plot for weeding. Although the time required to finish weeding a plot has not been concretely determined, this amount seems reasonable compared with the daily wage farmworkers received on white farms in Muden. In March 2013, the minimum wage for farmworkers was raised to R105 from R69 per day because of strikes on commercial farms in Western Cape Province. Although the increase in the minimum wage caused an outcry from many white farmers nationwide, even pushing some to apply for an official exemption, white farmers in Muden were generally compliant with the new regulations. The amount of wages black farmers paid to their workers in Msinga were not dissimilar from those of casual workers on white-owned farms.

As shown in Table 3, the majority of farmers (82 out of 94 respondents)<sup>(22)</sup> in the irrigation scheme sold their crops. This was partly in order to recoup the production costs such as tractor services, inputs (seeds and fertilisers) and labourers. But which types of crops do they sell, and at what type of market do they sell them? Until recently these questions had not been fully explored (Cousins, 2012; Van Averbek, 2012; Aliber et al., 2013; Van Averbek & Denison, 2013), as black people on former homelands were traditionally believed to have engaged only in subsistence farming. In contrast, this study found that multiple types of informal markets are accessible and regularly used by farmers in the scheme. Table 3 lists the main markets where these farmers sell their agricultural produce. It is clear that most farmers sold their products to informal

**Table 3.** Where do you sell your agricultural produce? (multiple answers) (N = 82)

Main market	Respondents
Bakkie traders	57
Street traders/vendors	30
Neighbours	25
Pension day markets	7
Supermarkets	6

Source: Author's interviews in 2014.

markets or “loose” supply chains (Cousins, 2015: 258) such as bakkie (pick-up trucks) traders, street traders/vendors, neighbours, and pension day markets, and only six respondents sold their products to supermarkets which is considered to be a “tight” supply chain.

Bakkie traders refer to the owners of pick-up trucks (commonly known as “bakkie” in South Africa) who come to the fields to buy agricultural products and sell them to wholesalers and retailers in town. Some bakkie traders also transport people as a means of local transport as well. Bakkie traders seem to have been around for some time in rural KwaZulu,<sup>(23)</sup> but it is only recently that their roles in connecting black small farmers with urban markets have caught the attention of researchers (Cousins, 2012). Many black farmers in the irrigation scheme sold their crops to bakkie traders, as it was one of the most convenient markets for a majority of respondents in this study who did not own a vehicle or have access to transportation. Unlike their neighbours, bakkie traders purchased crops in large quantities. Even if the yield for each black farmer was small, their concentration in the irrigation scheme made it worthwhile for bakkie traders to come and buy crops from them.

Another important market for farmers in the scheme was to sell their crops to street traders and/or vendors in the nearby towns of Greytown, Weenen, and Tugela Ferry. Street traders came to the Mooi River Irrigation Scheme from as far as Pietermaritzburg and Durban. Black farmers also hired transport individually or in groups and delivered their crops to street traders in nearby towns. Some even sold their crops as street traders in town themselves. Farmers understood that Greytown and other nearby towns offered them large markets to sell their goods. Street traders were also a good alternative in the event that the bakkie traders failed to come by when the crops were ready.

Other informal markets included sale to neighbours, who of course were easily accessible and this was especially important for those who had not been farming for very long, and the so-called pension day markets. The latter was held once a month in various localities and was also usually a site for local festivities. The size of the pension day market depended on the size of the locality and on how many people came to collect social grants. One of the biggest pension markets in the area was held in Muden, where numerous traders came and sold a wide range of goods including fresh food, vegetables, raw meats, snacks, *muti* (medicine), clothes, shoes, insurances, and small electrical appliances like radios.<sup>(24)</sup>



## CROP SELECTION AND PROFITABILITY

Farmers' crop choices also reflected their market orientation. Many of them grew beans, potatoes, tomatoes, spinach, sweet potatoes, cabbage, and maize. While some of these crops (especially beans and spinach) were grown mainly for personal consumption, others were sold. Although maize is a staple grain used to make *pap* and *putu*, which people eat on a daily basis in Msinga, many of them bought ground maize flour (*mieliemeal*) from shops and sold their own maize as green-mielie. These green-mielies are either sold in supermarkets as fresh corn, or boiled and sold by street traders in many towns in KwaZulu-Natal Province.<sup>(25)</sup> These fresh vegetables are considered commercial crops for black farmers in the irrigation scheme. The question is whether they are profitable, and to what extent?

As previously discussed, black farmers' income from crop sales could not be calculated using the data from the semi-structured interviews in 2014. Therefore, when the follow-up fieldwork was conducted in 2016, farmers were asked which crops they grew during 2015 and the first half of 2016 by using a calendar. The farmers were then asked how much they spent to grow each crop and how much they earned from it using an income and expenditure sheet for each crop they grew. This exercise indicated that the farmers could grow most vegetables twice per year in the irrigation scheme. However, not all farmers were willing to talk about money, while some were unable to remember how much they spent or earned from their crops, especially for the previous year (2015). The data limitations in this study regarding income calculation must therefore be acknowledged. Nonetheless, the data indicate that growing tomatoes was the most expensive activity, but it was also the crop that gave farmers the highest return.

Table 4 shows how much Ms S (female farmer in the scheme) spent on growing tomatoes and maize and how much she earned by selling these vegetables during the January to June 2016 season. She planted tomatoes on 2 plots and maize on 1.5 plots. Her agricultural expenses were broken down to tractor services, seeds or seedlings, fertiliser, pesticide and other items. During this season, she spent R4,595 in total to grow tomatoes on 2 plots, while it cost only R580 to grow maize on 1.5 plots. This shows that growing tomatoes is quite expensive due to the high price of seedlings and other expenses which do not occur if one grows maize. However, when we compare how much she earned by selling these vegetables, we are struck by the large amount of income tomatoes brought to her in that season. She earned R16,000 from tomatoes, while maize brought her only R3,500. Simple calculation of deducting expenses from income for each crop tells us that she made a profit of R11,405 from tomatoes and R2,920 from maize. Ms S was not an exceptional case. During the fieldwork in 2016, we did the same exercise with 14 farmers. Of these, 12 farmers grew tomatoes at some point during 1.5 years (2015 and the first half of 2016). Except for one farmer whose expenses exceeded her income from selling tomatoes, they made profits ranging from R700 to over R30,000 from

**Table 4.** Comparison of profitability between tomatoes and maize: Example of Ms S

Tomatoes: Jan–Jun 2016: 2 plots		Maize: Jan–Jul 2016: 1.5 plots	
Expenses (R)		Expenses (R)	
Tractor	860	Tractor	430
Seedlings	1,300	Seeds	150
Fertiliser	735		
Pesticide	600		
Other (pole, rope)	1,100		
Total expenses	4,595	Total expenses	580
Income	16,000	Income	3,500
Profit	11,405	Profit	2,920

Source: Author's interviews in 2016.

tomatoes for one crop season. Table 4 also indicates that apart from tomato cultivation which has various expenses unnecessary to other crops, the costs of tractor services pushed up the total cost of production and reduced the profit margins of other vegetables.

During the initial visit to the Mooi River Irrigation Scheme in 2014, we wondered why so many farmers grew tomatoes. Tomatoes are perishable vegetables and, therefore, farmers need to find markets to turn them over in a relatively short period. It was also thought that competition might bring down the price of the tomatoes; however, after calculating expenses and income, it was clear that tomatoes were the most profitable crop. Given the low level of literacy among farmers, especially elderly female farmers, and based on my impression of reviewing income and expenditure sheets with some of them, it seemed that they had never calculated these figures in detail.<sup>(26)</sup> Nevertheless, the farmers' crop choices made sense economically and it can be said that they were responsive to price differences.

This does not mean that competition among farmers in the irrigation scheme is non-existent. In 2016, some farmers in Block 2 told us that they agreed among themselves on the selling price per crate of tomatoes when they sold to bakkie traders and street traders in the fields. It is not difficult for farmers to share the price information as farmers who grow tomatoes live in nearby villages and see each other in the field almost on a daily basis especially during the harvest season. However, the number of growers far exceeds the number of bakkie traders and street traders, and the farmers' agreement is not binding in a sense that there is no punishment. A few farmers admitted that they had sold their tomatoes to bakkie traders at lower unit prices because they feared they would not be able to sell all their crops at the right time.

## FARMERS' VIEWS ON AGRICULTURAL PROBLEMS

In this section, the major constraints on farming will be discussed, especially those cited by farmers themselves. De La Hey & Beinart (2017) argues the

importance of considering people's own perceptions of farming and reasoning in order to find out why arable lands have largely been left fallow in the former Transkei in recent years. They particularly highlight the shortage of family labour for agricultural work due to the younger generation's preference to look for a non-agricultural job as a constraint in farming in their researched village. This study also reported the existence of uncultivated plots in the irrigation scheme and how the shortage of labour facilitated land rental practices. Leasing a plot usually took place when a plot owner became too old to work and did not have a family member who was interested in farming. However, when we asked those farmers who were actually working on the plot in the irrigation scheme during our fieldwork in 2014 about their concerns and problems in farming, they raised other issues as their perceived problems in farming.

Table 5 shows that three problems dominated their concerns in 2014. The largest group of respondents (60) said that the biggest problem was livestock destroying their crops. Many farmers lamented that they had to go to their plots early in the morning to chase away cattle and goats. Interestingly, these farmers were often livestock owners themselves. The primary problem in Msinga was not, therefore, a conflict between agriculturalists and pastoralists. Many said that they tried to find solutions "as a community" by collectively fixing fences or organising meetings with livestock owners. The root cause of crop damage caused by livestock was inadequate fencing. The scheme's outside boundary was originally fenced by the KwaZulu government in the 1970s or 1980s. According to respondents, it had not been well-maintained. Although the farmers regularly repaired it themselves by using reed sticks and trees from the bush, the deterioration in the condition of fences was apparent and there were holes and gaps here and there.

The second largest group of respondents (24) complained of tractor-related problems. Some were unhappy about not being able to own a tractor, but most people grumbled about the high cost of hiring private tractor services. As illustrated above, hiring tractor services was a major cost of growing crops for them. Their problem was exacerbated by frequent delays and unreliability of cheaper governmental tractor services. Apart from ploughing by tractors, the government sporadically provides assistance to farmers in the irrigation scheme

**Table 5.** Farmers' own views on problems in farming in 2014 (multiple answers)

Problems	Respondents
Livestock destroying crops (lack of proper fences)	60
No tractor, cost of hiring it, or government tractor delays	24
Water shortage	21
Cost of inputs	8
Theft (crops and fences)	6
Lack of or unreliable markets	3
Lack of farming tools	3
Others	12

Source: Author's interviews in 2014.

in the form of the provision of seeds (potato seeds, beans, or spinach seeds) and fertilisers. Forty-one respondents (out of 94) answered affirmative to our question; “have you ever received any governmental assistance?” However, the provision of seeds and fertilisers by the KZN Department of Agriculture doesn’t occur regularly and more importantly it doesn’t reach every farmer in the scheme. Thus farmers would say to us “the government gave some farmers seeds and fertilisers, but I didn’t get anything.”<sup>(27)</sup> We don’t know how the government decides to provide seeds to some farmers and not others.

Apart from the government, an agricultural and rural development NGO called LIMA offers credit services in the form of seeds and fertilisers to black farmers in the irrigation scheme, which they must pay back at the end of the harvest. LIMA staff based in Tugela Ferry also visit the irrigation scheme regularly and offer on-site training courses on proper crop care, soil preparation, and seedling cultivation. Considering that the provision of agricultural training and extension services by the KZN Department of Agriculture is limited in the irrigation scheme, LIMA’s courses are a welcome intervention for farmers who want to improve the quality of their crops.<sup>(28)</sup> However, not all farmers are keen to join the LIMA scheme because of fear of debt, and only 14 respondents (out of 94) told us that they received assistance from NGOs in 2014. Thus not all farmers have the same level of risk-aversion. This brings us to the question of diversity and differentiation among black farmers in the irrigation scheme, which shall be discussed in the final section below.

The third largest group of respondents (21) mentioned the shortage of water as a constraint in farming. Perhaps this is the most worrying, as this area is no stranger to the regular occurrence of severe drought and there is no quick and easy solution to this problem. According to respondents, the KZN Department of Agriculture instructed them to introduce a water-saving and water-sharing measure. Under this system, the farmers in each block were allocated one day per week to retrieve water from the canal. This means that they could only irrigate their plots on a particular day of the week. The Department of Agriculture also employed a few local farmers as water guards to maintain water-related infrastructure in the irrigation scheme. The water guards also watch farmers to prevent them from breaking this local rule. However, not all farmers knew which days were allocated to their blocks and during the fieldwork we saw a water guard shouting down at farmers who drew water to their plots on the days when they were not supposed to do so.

## FARMER DIVERSITY

The aforementioned description of black farmers in the irrigation scheme confirms a historically held view that most farmers on former homelands are women, although it contradicts an equally popular view that they mainly grow crops for subsistence. A considerable number of black farmers in the Mooi River Irrigation Scheme sell their produce in various informal markets including

local markets (neighbours), bakkie traders, and street traders in nearby towns. Land-rental practices also exist to a certain extent. Moreover, black farmers have also been integrated into the modern agricultural sector through their reliance on modern farming technology like using tractors and purchasing inputs like seeds and fertilisers. Nevertheless, not all of them can be categorised as emerging or capitalist-oriented farmers. There is considerable diversity among black farmers in the irrigation scheme in terms of the scale of their agricultural production, age, and gender. Since this study could not establish the income each farmer earned from agriculture, I would like to explore this diversity from a sociological perspective by introducing four different types of farmer in terms of gender and generation. Understanding the diversity of farmers is important to assess their diversified needs and policy prioritisation.

The most dominant type of farmer in the irrigation scheme is a *gogo* (granny) farmer. They are women of pensionable age or younger who have grandchildren living with them in Msinga. They are usually married/cohabitating or widowed. For those who are married, their spouses are usually away. They normally cultivate 1–4 plots, but they are sometimes rented and not owned. Not all farmers in this group sell their crops for profit. Some use their plots for subsistence, although they will sell extra crops if a neighbour is interested in buying them. For example, Ms I, who was 67 years old, grew maize, butternut and spinach on two plots which she took over from her late sister. She grew these vegetables for mainly family consumption and only sold a small amount of them to neighbours if the latter asked her.<sup>(29)</sup> However, there are also *gogo* farmers who grow tomatoes for profit. One such example was Ms D, who was 58 years old and supported her grandchildren through agriculture. She started farming 20 years previously after returning to Msinga from Nkandla when her husband's parents died. She grew tomatoes, potatoes, green peppers, and onions on four borrowed plots. She employed three workers who worked together with her in the fields from August to December each year. She cultivated her crops only during the second half of the year, as she stated that she was busy looking after grandchildren during the first half of the year.<sup>(30)</sup>

The second type of farmer is a *mkhulu* (grandfather) farmer. These are men of pensionable age or younger who also have grandchildren. They are quite often former employees of the KwaZulu Department of Agriculture and own a tractor or two, with which they offer private tractor services to other farmers. These farmers tend to own more plots than the others, some of which they had inherited from their fathers. One such farmer was a 72-year-old man named Mr A. He was a former employee of the KwaZulu Department of Agriculture and owned a tractor. He began farming on his own 30 years previously, but helped his father on the land when he was a boy. He grew numerous vegetables including maize, potatoes, peas, tomatoes, onions, green peppers, and butternut squash on 12 plots, four of which he had inherited from his father. He obtained the rest from other people in the area when they had stopped farming. He did not employ workers, as he could rely on his family members to assist him in

the fields. Although his scale of farming was relatively large compared to the other farmers in the irrigation scheme, he did not know how much he paid for seeds and fertilisers, or how much income he earned from selling his crops. He said that this was because his wife (*gogo*) controlled the financial aspects of the farming operation.<sup>(31)</sup>

The importance of migration as a livelihood strategy for rural households has been discussed extensively in South African literature (May, 1996; Beinart, 2014). What is less known is their economic activities after they voluntarily or involuntarily return to their birthplace. Against this background, I call the third type of farmer a ‘returned migrant farmer.’ These are usually men in their 40s or older who have returned to Msinga after being retrenched in the city. The kind of work they did away from home varied, as does the amount of time they worked as migrant workers. However, I came across several men in their 50s or older who worked in the mines near Carletonville in west of Johannesburg, which seemed to be one of the most popular places for migrant workers among a certain generation of men from this part of Msinga. Younger men worked in the cities as taxi drivers or in other occupations rather than working in the mines. One example of such a worker was Mr B, who was 44 years old. By 2016, he had been farming for three years since returning from Pietermaritzburg and Johannesburg. Although his farming experience was not very extensive, he was elected as the Secretary of the Farmers Committee for Blocks 1–3. He grew tomatoes, cabbage, and onions on six plots that he had inherited from his mother. He said that he inherited all his mother’s plots, as his siblings were “lazy,<sup>(32)</sup>” suggesting that he was the only one in the family who was interested in taking up farming.

The last type of farmer is atypical in the irrigation scheme. These are young single or married female farmers whose spouses are either away working in the city as migrant workers or who have deserted them. One example was Ms N, who was 30 years old and began farming in 2016 after years of unemployment. She grew tomatoes, potatoes, and onions on three plots that she had inherited from her late father. In fact, her inheritance prompted her to take up farming. Her father had a total of eight plots: three were given to her, three to her stepmother, and two to her brother, although he leased them to other people since he worked in Vryheid, a town in northern KwaZulu-Natal. She also had a sister who was a bakkie trader and was not interested in farming and therefore did not get a plot.<sup>(33)</sup> This means that the inheritance was negotiated within the family and determined based on personal needs and preferences.

## CONCLUSION

This study discussed current practices in black farming in the Mooi River Irrigation Scheme in the former KwaZulu district of Msinga, South Africa. Even though the income from farming may not be sufficient for most of them to be categorised as full-time or emerging capitalist-oriented farmers, it still represents

an important component of their livelihoods. It is important to stress that many of them grow crops not only for subsistence purposes but also to earn an income. Farmers in the irrigation scheme no longer grow staple foods like maize for home consumption, but grow vegetables for sale instead, as the latter are in high demand in local towns. They buy their own *meliemeal* from shops instead of living from their own production. The availability of water and various informal markets provided black farmers in the irrigation scheme with opportunities to pursue agrarian livelihoods. This finding itself is not new, as other studies on similar irrigation schemes also pointed out “reasonably high levels of crop productivity” among black farmers in such schemes (Cousins, 2012: 22). This study also explored diversity and differentiation among black farmers in the irrigation schemes and introduced four types of such farmers based on gender and generation. I used sociological criteria of gender and generation rather than the scale of production or asset ownership in order to show that not all black farmers in former homelands are old grannies and grandfathers. Among the younger generation, there are some people who would take up farming when the opportunity presents itself and they include those who have spent some time in the cities as a migrant worker. It is important to acknowledge that their needs, ambitions and constraints might be different from their parents or grandparents’ generation.

The semi-structured interviews with 94 farmers in 2014 rendered a snapshot of the farming practices in the Mooi River Irrigation Scheme. The single survey round did not establish the length of time that black farmers in the irrigation scheme had been selling their products to wider markets outside their local neighbourhoods. Commerce in this sense may be a relatively recent phenomenon, especially since social grants have increased the availability of cash in rural areas. The increasing penetration of bakkie traders into rural areas and the regular occurrence of pension day markets seem to have provided an important stimulus for black farmers to become more market-oriented. The expansion of informal markets was necessary to protect them from competition with white commercial farmers with larger land plots and more resources. An attempt was made to supplement this snapshot from 2014 by asking farmers additional questions regarding historical changes in local agricultural activities during follow-up research in 2016; however, many farmers issued contradictory statements that hindered further analysis. Further research is required to understand the historical continuities and changes in local farming practices in the irrigation scheme properly.

Uncertainty exists not only with regard to the past but also in relation to the future of the irrigation scheme. There are at least three reasons for this. First, there is uncertainty in terms of land tenure. It is currently unclear which institution oversees land allocation in the irrigation scheme, the traditional authority or the KZN Department of Agriculture. The traditional authority’s power over land allocation in the irrigation scheme seems to be increasing, but the consequences of this, in terms of tenure security for farmers, remain unknown. This study saw that while the KZN Department of Agriculture wanted to encourage capable



farmers to expand their production by using uncultivated plots, the strong social norm in the customary land tenure system which has a tendency to emphasize equality among members of a group prevented it from happening. In this sense, it might be possible to say that customary tenure could provide security to relatively resource poor farmers like most *gogo* farmers, but hinder the expansion of agricultural production by ambitious farmers who are willing to take a risk like the ones who joined the LIMA scheme.

Second, the number of plots cultivated by each farmer is decreasing because of division by inheritance. Split inheritance seems to be fairly common among farmers in this irrigation scheme. Not only did the previous generation have more or larger plots than current farmers, but also current farmers with multiple plots are planning to divide them for their children when they become too old to grow crops themselves. The prevailing belief among the older farmers in the irrigation scheme is that young people are not interested in farming, so they do not perceive allocating inherited plots to multiple family members as a major problem. Taking the example of the young female farmer (Ms N), it is obvious that the number of plots each member of the family can inherit is getting smaller due to split inheritance. Although the viability of farming decreases when the inheritor receives a fewer number of plots, once the plots are divided among inheritors, they usually work individually on their own plots and don't farm cooperatively. However, Ms N is also an example of the younger generation who may take up farming when the opportunity presents itself through inheritance.

Third, the availability of water may become a more crucial factor than that of land in the irrigation scheme in the future. One century ago farmers on the irrigation scheme were required to pay for both land rental and water usage to the government, but this practice died out and none of the farmers we spoke to in 2016 recalled ever having to pay for the water. Given that water is getting scarce in the irrigation scheme, it is possible that the government might re-introduce the water use fee and those who cannot afford to pay it might eventually have to give up farming.

Therefore, the possibility for farming expansion in former homelands is limited by the customary land tenure system, by split inheritance among current plot-holder households and by the increasing shortage of water on the existing irrigation schemes. If black farmers want to expand their production, they need to look elsewhere, which would most likely be to land in formerly white-only farming areas. This scenario could be realised only by implementing more land reform policies. Moyo & Mine (2018) emphasise the importance of peasant production of the labour-absorbing type in order to make society more stable on the African continent. They convey a clear message that as long as a sense of injustice remains widespread as in the case of unequal land ownership in South Africa, we cannot hope to envision the formation of a more equal and stable society. Negative evaluation of many land reform farms by the Minister in charge of land reform that I quoted at the beginning of this article should not be used to discourage the implementation of more land reform. Many studies in fact blamed a lack of timely, adequate and consistent state support after

land was transferred to the beneficiaries for their poor agricultural performance (Hall, 2007; Aliber et al., 2013).

Even though the future of black farming may not lie in former homelands, the fact that a general understanding of the rural economy is still limited justifies the necessity for this kind of research. This study on the one hand identified the availability of water and various informal markets as opportunities for small-scale black farmers to pursue agricultural livelihoods. On the other hand, a number of constraints were also recognised including shortage of labour, high production costs (especially hiring tractor services), lack of or unreliable state support, and the increasing water shortage. State support is important not only for beneficiaries of land reform, but also for residents of former homelands who also engage in farming. When we visited the Mooi River Irrigation Scheme in 2014, the most serious problem for farmers was livestock destroying their crops due to poor fencing. Subsequently the government decided to renovate and upgrade both the Mooi and Tugela River Irrigation Schemes. The renovation package included replacing old fences with new ones and installing underground water pipes and communal water valves to reduce water leakage. Although local farmers were not sure about how effective the new irrigation system would be to save water, they welcomed new fences. Unlike sporadic provision of seeds and fertilisers to a limited number of farmers, everyone benefited from new fences. It remains to be seen whether the government can introduce effective intervention such as this in more rural areas. Existing research on other irrigation schemes do not give us much hope (Tapela, 2008; Van Averbeké & Denison, 2013), but what we researchers hope is that a better understanding of the rural economy can serve as a guide to help policy makers assess the workable livelihood options for that 30% of the South African population who still reside in these areas.

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## NOTES

- (1) The current estimate is that approximately 10% of farms were transferred to black people through land reform by 2016 (Zuma, 2017).
- (2) However, one block is no longer in use due to severe soil erosion. Interview, Extension Officer of KZN Department of Agriculture, Tugela Ferry, February 5, 2015.
- (3) 1906/292 Engineer Mooi River irrigation works, Mudén, SNA I/1/334, Pietermaritzburg archive.
- (4) Interview, Extension Officer of KZN Department of Agriculture, Tugela Ferry, February 5, 2015; Interview, Village Elders, Msinga, August 13, 2016.
- (5) 1908/2706 W.R. Wilson, Resident Inspector Mooi River Works, Mudén, SNA I/1/410; 1918/3461 Financial, irrecoverable revenue: Mooi River and Tugela irrigation works, CNC 343, Pietermaritzburg archive.
- (6) Interview, Extension Officer of KZN Department of Agriculture, Tugela Ferry, February 5, 2015.
- (7) These interviews were conducted jointly with Mr Mnqobi Ngubane, a doctoral student at the Institute for Poverty, Land and Agrarian Studies (PLAAS), University of the Western Cape, where I was based as a visiting research fellow from 2013 to 2015. We were assisted by two research assistants whom we recruited in Mudén.
- (8) According to an extension officer from the KZN Department of Agriculture, which oversees the Mooi River Irrigation Scheme, there were about 300 farmers in each block. However, the size of each block varies and he did not have a list of plot-holders.
- (9) In traditional Zulu society, marriage is a process that can take time to complete. Thus, we found many older couples who had lived together for many years, but were not married. We combined married people with these “de facto” married (cohabitating) couples into a single category of “married/cohabitating.”
- (10) Since the land in the irrigation scheme is fenced and situated separately from homestead areas, this doesn’t include the space for homestead. Gardens are usually made within the residential land (homestead area), but those who have a plot in the irrigation scheme rarely have a garden. This is because of two reasons. First, people think that growing crops in gardens is not easy without access to irrigation water. Second, proper fencing is necessary in order to prevent livestock from destroying their crops in the garden and fencing can be expensive.
- (11) *Ingonyama* means ‘Zulu king.’
- (12) Interview, Inkosi Mchunu, Mhlangana, July 18, 2014. He died in early 2015 and was succeeded by his son, who had been the acting chief of the Mchunu traditional authority for some time.
- (13) Of the remaining two respondents, one said that he obtained his land from a previous owner and another said that he was brought to the land by a government truck known as a “GG truck” after being evicted from a white farm.
- (14) Cousins et al. (2011) also discusses the role of neighbours in allocating residential lands in other areas of the Mchunu traditional authority as a “living law of land.”
- (15) This may not have always been the case historically. Some female respondents said that when they approached a chief to obtain a Permission to Occupy (PTO) Certificate for their residential land, they usually went to the chief with their father or male children. PTOs were issued in KwaZulu in the 1980s and 1990s.
- (16) Interview, Induna, Msinga, August 17, 2016.
- (17) Interview, Extension Officer of KZN Department of Agriculture, Tugela Ferry, February 5, 2015.

- (18) Interview, Induna, Msinga, August 17, 2016.
- (19) Interview, Farmer, Msinga, June 5, 2014.
- (20) According to an extension officer of the KZN Department of Agriculture, the department's tractors are divided by *amakhosi*. *Inkosi* Mchunu has five tractors in total for his area (both irrigation and dry land farming areas), but only three tractors were in good condition at the time of interview in early 2015. Also, five agricultural advisors work in *inkosi* Mchunu's area and they must share these five tractors amongst themselves. This means that the extension officer of the Mooi River Irrigation Scheme can use the tractor services only on Fridays on Blocks 1–12 where he is in charge. Black farmers who have plots there have to be in the fields if they want their plots to be ploughed by the department's tractor (interview, Extension Officer of KZN Department of Agriculture, Tugela Ferry, February 5, 2015). According to the respondents, whether the tractor service was free depended on the type of tractor used by the department. The modern tractor that can make lines was not free.
- (21) One respondent stated: "Ploughing costs R150 per plot. Making soil smaller costs R120 per plot and making lines costs R120 per plot" (Interview, Farmer, Msinga, June 11, 2014).
- (22) The discrepancy between the number of respondents here and those reported in the earlier section is because we asked farmers two separate questions during the interviews in 2014. In the early part of the interview, we asked them to list their sources of income (How do you make a living?) and 77 said that they grew and sold their crops. Then, after asking questions related to land tenure and the type of crops they grew, in the middle of the interview we again asked them whether they sold crops, and 82 answered affirmatively.
- (23) According to farmers, bakkie traders have been coming to the irrigation scheme for at least the past 20 years. However, whether the number of bakkie traders has increased or decreased during this period could not be established because the farmers' answers were contradictory. Some said that it had increased, while others said it had decreased.
- (24) During one pension day market in Muden in August 2016, I counted at least 151 traders selling various items. While some of them worked as professional traders moving from one pension day market to another, others were farmer-traders who brought their own vegetables to sell at that event.
- (25) One of the reasons why farmers in the irrigation scheme do not consume their own maize at home is a lack of proper storage facilities. To address this problem, some black farmers in Limpopo have begun storing their maize in commercial silos, which used to be used exclusively by white farmers (interview, Prof. Wim van Averbek, Tswane University of Technology, Pretoria, August 4, 2016). I have not come across a similar practice among black farmers in the Mooi River Irrigation Scheme, but there are such silos in Greytown, which may be used for the same purpose.
- (26) We left a copy of the income and expenditure sheet with each farmer so that they or their family members could get a better understanding of the profitability of their crop farming.
- (27) Interview, Farmer, Msinga, June 5, 2014.
- (28) The KZN Department of Agriculture has a satellite office in Kwanteneshane, which is situated in the middle of a long stretch of irrigation-scheme land right next to Block 6. The office is manned by an officer who works with water guards. There were about 5–7 tractors parked outside this office in 2014, but we never saw them operating in the fields. The extension officer from the Department in Tugela Ferry is supposed to visit this satellite office 2–3 times a week, but the irregularity of transport options from

Tugela Ferry to Kwanteneshane seems to hinder him from doing so.

(29) Interview, Farmer, Msinga, August 15, 2016.

(30) Interview, Farmer, Msinga, August 12, 2016.

(31) Interview, Farmer, Msinga, August 12, 2016.

(32) Interview, Farmer, Msinga, August 12, 2016.

(33) Interview, Farmer, Msinga, August 18, 2016.

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